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Before the Subcommittee on General Farm Commodities and Risk Management
U.S. House of Representatives
April 26, 2006

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to appear before this hearing to have an overview of the Federal Crop Insurance System.

I would like to discuss the economic reasons why growers make their choices on crop insurance products and perhaps even selecting no crop insurance under the expectation of disaster assistance being provided. Currently, the Risk Management Agency (RMA) meets the test of actuarial soundness defined as total indemnity payments equaling total premiums paid based on the entire book of business over the past 17 years. The premiums paid including subsidies (table 1).

Are Corn Belt Farmers covering losses in high risk States? Growers in the Corn Belt have often questioned if they are paying for losses in other states. Illinois ranked 49th with a loss ratio of 56 cents over the past 17 years based on all crops and all contracts (table 1). This would represent a 44 cent underwriting gain. However, the farmer paid premium loss ratio was $1.07 over the 17 year period meaning that on average Illinois growers paid in $1.00 and received a $1.07 back in indemnity payments. Farmer paid premiums have not been shifted to other states but other states have benefited by capturing more of the federal subsidy and also the "unintended subsidy" to cover underwriting losses for the entire book of business.

There continues to be discussion about fraud, waste and abuse and the belief by many growers that their premiums would be lower if public policy could eliminate this activity. While some people have tossed around the word fraud rather loosely, it is doubtful that anyone has any hard statistics on the amount of fraud that would meet the legal test. It is likely most of this activity being labeled as fraud probably comes under the heading of abuse or adverse selection.

A classic adverse selection example is the ability for growers to buy either Crop Revenue Coverage (CRC) or the Revenue Assurance with the Harvest Price Option (RA-HPO).[2] These products provide essentially the same coverage but with different premiums. This allows growers to select the product that has the lowest premium cost. The result is reduced premiums paid in to the system with no impact on the indemnity payments paid out of the system.

Because growers have choices between products it is very important that rates and underwriting rules be relatively "correct" between products. Otherwise it will encourage growers to

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[2] Academics would argue this is not adverse selection because the information is not asymmetric. However, unless RMA acts on the information the underwriting results are the same even if the information is not asymmetric.

shift to the product that will generate higher expected net indemnity payments. Since RMA owns both the CRC and the RA policies they are the only ones who can correct the ability of growers to "adversely select" between these two products. A simple solution would be to remove from the market CRC on any crop in a county that has an RA contract available. RMA's future plans are to combine CRC and RA into a single product but making this simple change will allow for that effort to go forward without allowing growers to continue "adversely selecting".

One issue with the CRC contract is it has a liability limit of no more than a $1.50 price increase on corn, while RA with the Harvest Revenue Option (RA-HPO) has no liability limit. Effectively insurance companies and their reinsurers have a liability limit because of the stop loss in the Standard Reinsurance Agreement (SRA), therefore only the government technically has an unlimited liability.

If RMA decides to follow the CRC model and include a liability limit then some thought should be given to making those liability limits consistent. For example, the current liability limit in cotton is about double the long run average cotton price. If the same standard were applied to corn the liability limit would be somewhere between $2.50 and $2.70 rather than the current $1.50. Obviously, the higher the liability limit the more valuable the contract is for producers who are using the policy as a method for lowering their risk of hedging and otherwise forward pricing grain or cotton.

It is extremely difficult to rate the higher limit levels because it would take an extremely large catastrophic event to trigger indemnity payments that would exceed the current liability limits in CRC. The 1996 wheat price narrowly missed exceeding the CRC liability limit therefore one must consider it is possible to exceed the current CRC liability limits.

Is public policy causing a shift to GRIP/GRP? Another insurance and lending industry's concern is current public policy shifting growers out of APH based products that have generated underwriting gains in the Corn Belt to county yield based products that so far have generated reduced underwriting gains and perhaps may even generate underwriting losses? While the data is currently very sparse, table 2 shows the performance results for Group Risk Income Protection (GRIP) and Group Risk Protection (GRP) versus APH based products that include; CRC, RA and APH. Coverages in table 2, only included those Illinois, Indiana, and Iowa corn contracts with 70 percent coverage and greater.

Illinois generated a GRIP corn loss ratio of $1.60 over the past 7 years, representing a 60 cent underwriting loss. During the same time period, APH based products in Illinois had a 48 cent loss ratio or a 52 cent underwriting gain (table 2). Those underwriting gains from the Corn Belt have been used to offset underwriting losses in higher risk states. Those underwriting gains have allowed RMA to hit the targeted loss ratio of 1.0.[3] If large numbers of growers in the Corn Belt shift from APH based products to GRIP, and these GRIP loss ratios don't change then the affect will be to generate an underwriting loss at the national level.

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[3] In the past the RMA targeted loss ratio was 1.07 but a target loss ratio of 1.0 would be necessary to cover all indemnity payments.

An alternative for producers suffering multiple year droughts and declined APH's combined with substantially increased premium costs to the point crop insurance no longer makes sense is to switch to a group policy. Because these policies are based on county yields they are using a longer run historical yield data set to generate premiums and expected indemnity payments. GRIP is a "put option" on expected county revenue while GRP is a "put option" on expected county yield. In that sense these products are not insurance but effectively hedging instruments. Like price hedges these county based options have a basis risk. Growers who purchase these policies are accepting the basis risk between their individual farm level yield and the county level yield.

A Kansas wheat grower in Rawlins County was considering the purchase of either GRIP or the GRP contract. The analysis reported in table 3 is for Rawlins County wheat. National Agricultural Statistics Service (NASS) county yields were available for Rawlins County back to 1937. One can not simply use the raw county yield to generate rates and guarantees because improved technology has caused yields to trended upwards over the past 69 years. In table 3 yields are reported both for harvested yields and yields per planted acre. The GRP contract for winter wheat in Rawlins County is based off of planted acres as it should be. Notice the 2004 county yield based on planted acres was 5.5 bushels and that was the second lowest yield ever. The previous low yield was in 1939 but when yields were adjusted for improved technology the 2004 yield was the worst ever!

This data suggested Rawlins County wheat will likely generate underwriting losses under GRIP/GRP over the next 30 years if Kansas has similar weather patterns. However, this analysis simply consider historical payouts assuming these contracts were available and does not account for any changes in rates that may occur in the future. Also, it is simply a static model and no Monte Carlo simulation or other similar analysis was applied. In addition, a long-run average volatility number was used for rates rather than a volatility number that would vary year by year.

The individual grower's historical farm yield records generated a near perfect correlation between his yields and the county yields. However the number of farm yields available was very small. It is fair to say his yields were highly correlated with the county yields but probably not a perfect fit as the data would suggest.

This particular grower did make a switch to GRP based on these numbers. This farm is a multi-generational farm and covers a "large" amount of acreage. Large farms are more likely correlated with county yields than small farms. If a grower farms the entire county then the county yield and the farm yield are the same. However, if a person only owns a quarter section of land the level of correlation is probably much less especially in areas that are prone to hail damage. In this particular situation the landlords continue with their APH based contracts because it is very likely their yield correlations with county yields are substantially lower. Besides few growers would want to explain to their elderly landlord how it was possible to have no yield, receive no insurance payment but still owe premium payments.

Basis risk in APH based products. Obviously there is basis risk in an option designed insurance contract but there is also basis risk in the current APH based products. In the revenue products, for example, futures markets prices are used to adjust losses but growers are selling in to a local cash market. If the price basis widens between the local cash market and futures prices the results will be less than expected under the revenue products.

Another source of basis risk in any APH based product is quality loss adjustments. The RMA quality loss formulas don't account for the real market value loss caused by quality damaged grains. This is another form of basis risk that is not covered by APH based products or county based products. The basis risk is obviously substantially higher in the option based products. The most obvious GRIP/GRP basis risk is hail damage particularly on a smaller farmstead that could drive yields to zero, without having any major impact on county level yields.

Should GRIP/GRP cause insurance agents any concern? The roll of the insurance agent is to advise growers on alternative insurance products and help them to select the product that best fits their needs and risk tolerance. Some insurance agents have assumed the introduction of GRIP/GRP was for the purpose of eliminating the need for crop insurance agents. As long as growers are given product choice, the roll for agents is increased and the top agents over time will capture a larger market share. Remember the landlords for the cited Kansas wheat farm continued to insure with APH products. The agent continues to maintain the grower's historical yields, leaving open the alternative for the grower to switch back to an APH based product in the future. The more complicated the program, the more valuable a top agent's service will be to the producer.

Ad Hoc disaster aid is an alternative "crop insurance" product. Another form of risk protection is ad hoc disaster aid, and another example of how growers tend to select against the current public policy. Disaster assistance is simply a crop insurance contract with the government paying 100 percent of the premium costs and all of the administrative costs. Under current policy, growers are taking a risk that ad hoc disaster payments will not be provided. However, there have been enough disaster assistance programs that some producers have come to depend on those payments being provided. While the details are not final in the current proposed disaster assistance program, it does not currently carry a limit on combined disaster aid and crop insurance payments. Under the prior ad hoc disaster assistance program, growers could not collect more than 95 percent of their "expected revenue" from combined crop sales, insurance payments and disaster assistance payments. Therefore, growers who purchase high levels of crop insurance, in some cases, had their disaster assistance reduced creating an additional incentive not to buy crop insurance.

Insured growers are better off with an average yield or total crop failure with the greatest financial loss occurring with a "shallow" yield loss. The worst outcome for an insured grower is to have a 35 percent "shallow" loss and for the national average price to increase to the strike price on the counter cyclical payment and eliminate the government payment too. The "shallow losses" are significant but have not been addressed by either ad hoc disaster assistance or crop insurance. The ad hoc disaster assistance programs have targeted payments to the part of the yield curve that could have been covered under crop insurance. Currently ad hoc disaster policy provides this individual grower nothing and the benefits from crop insurance will be limited once premiums are deducted because most crop insurance contracts are purchased at 75 percent coverage or less.[4]

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[4]A portion of a direct payment would also be paid under the current proposal that was not included in past ad hoc disaster programs, so producers with "shallow" losses would receive a payment of this provision remains.

An alternative is to target the disaster assistance to the part of the yield curve that is not insurable, i.e. the deductible part of the yield curve.[5] Under this policy ad hoc disaster aid would have a lower deductible than the current 35 percent and then a stop payment once losses exceeded 55 percent. This policy assumes yield losses from 50 percent to 100 percent were covered under the crop insurance program and would create an incentive for future crop insurance purchases.

Often growers have had some of their best financial years when they have had a total crop failure. In many cases they collected both, a maximum crop insurance payment and the maximum disaster assistance payment combined with the elimination of harvest expenses. The real "hole" in the safety net is not with a 100 percent yield loss, but it is with a 35 to 40 percent "shallow" yield loss. A 35 percent yield loss causes a significant reduction in revenue but the producer must still cover all expenses including harvest expenses.

An example farm was created to demonstrate this "hole" in the safety net. The largest financial loss for the example farm occurred with a 35% "shallow" yield loss generating $123.58 financial loss versus $89.31with a total crop loss for the RA insured grower (table 4 and 5). The uninsured grower would suffer a $164.18 loss and traditional ad hoc disaster aid would provide no payment for this loss. The targeted companion disaster aid approach would provide help and reduce the loss for the RA insured grower by $22. The amount paid will depend on the size of the budget authorized by Congress so the payment could easily be more than the $22 in the example.

The cost for this program would depend on whether Congress authorized a "full" price for a lost bushel or a percentage of the price as is currently being proposed in the current disaster Bill. Obviously, with a lower deductible more agricultural producers will have claims but claimants with severe crop losses would have smaller indemnity payments. A larger number of claimants are the effective driver in the cost of this approach. This targeted disaster payment would encourage more growers to purchase crop insurance coverage rather than depend on ad hoc disaster aid.

Finally, fraud is fairly straight forward but has a very high legal threshold that must be met. The Risk Management Agency is clearly pursing fraudulent activities through the legal system. The legal system requires a large amount of time between the actual acts and when the case is finally settled. Recently RMA has announced some high profile cases resulting in lengthy prison terms for growers, loss adjusters, and insurance agents involved in committing criminal fraud. Fraud is an issue in all property-casualty insurance and must be kept to a minimum through the legal system.

Are corn growers' premiums subsidizing wheat growers' indemnity payments? Corn growers have suggested they are subsidizing the rest of the crop insurance system. For that reason, all corn contracts were compared with all wheat contracts (tables 6 and 7). The data based on the history of the program over the past 17 years would suggest there is some basis for the argument. Across the entire United States corn generated a 78 cent loss ratio that would represent a 22 cent underwriting gain. Over the same period of years wheat growers generated a 1.17 loss ratio or a 17 cent underwriting loss. While clearly there have been wheat generated underwriting losses there would have been no net corn growers' paid premiums shifted to cover wheat losses. However, there would have been tax revenues used to cover those losses. Another way to think about it is

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[5]US Representative Sam Graves (R-MO) introduced legislation in 2003 that would have targeted disaster payments to the insurance deductible.

wheat captured more than a "fair" share of the subsidy while corn growers did not capture their full share of subsidy. On average, both corn growers and wheat growers were better off by purchasing crop insurance but clearly wheat growers benefited even more.

This could change in the future, primarily because corn growers now have the choice of switching from APH based products to the GRIP or GRP contracts. Assuming GRP and GRIP are rated correctly and this is more likely to be the case because only county yields drive the losses and over the long run corn loss ratios are expected to trend towards 1.0 from the current level of 0.78.

Summary. Growers have been perfectly rational in their decisions on managing risk based on current public policy. Growers who farm in states that have generated tremendous underwriting gains from their APH products have seriously considered switching to the GRIP and GRP contracts. These growers expect their premiums will no longer generate underwriting gains resulting in greater returns on the premiums they have spent.

Many insurance industry professionals have argued that this is not risk management. The risk transferred will depend on the farm-county yield correlation to transfer risk, a technical matter that might be true for some growers. "Large farms" are more likely to be highly correlated with county yields resulting in transferring risk. But the data would suggest a major motivating factor is growers are simply demonstrating they are willing to trade off a higher basis risk in return for higher expected payouts, a perfectly rational economic decision. So if public policy wants to eliminate the incentive to switch from APH to GRIP/GRP products based on higher expected returns from crop insurance then the premium rates for GRIP/GRP need to generate similar expected payouts to APH. The data clearly shows this is possible and certainly producers have reached the same conclusion based on the observation they are switching products.

In states that have had recent back to back disasters driving down APH's and increasing premium costs may also find the GRIP/GRP policies to be the preferred product. In fact, GRP may provide better protection for growers than GRIP in counties that have been suffering multiple year disasters. Until the APH based guarantees reflect a longer run data set than the current 10 years, it is likely that GRIP/GRP will be the preferred alternative for growers who suffer multiple year disasters.

Another perfectly rational alternative by some producers is simply to buy no insurance and count on ad hoc disaster assistance. Under the present policy, ad hoc disaster assistance has applied the payment to the same part of the yield curve that could have been insured under crop insurance. Providing disaster assistance obviously gives producers an alternative to the purchase of crop insurance. One alternative method is to target any disaster assistance to the deductible in the insurance contract rather than targeting the payment to the yield curve that could have been insured. That would help the growers with the biggest financial loss, which is caused by "shallow" losses, plus it would also provide an incentive to purchase crop insurance because the insurable yields would have none or only limited disaster aid coverage under this policy.

How to adjust premium rates in a timely matter to reflect changes in new technology or to identify producers who are abusing the crop insurance system is a more difficult question. Because government is limited in its ability to adapt quickly to changes in new information, probably the most efficient method to reflect changes is using the private sector. The most extreme proposal is

Senator Lugar's plan that would provide insurance vouchers to growers and they would simply use it to purchase a private insurance contract. In order for coverage to be widely available especially in the Great Plains it would likely require the government to continue as a reinsurer of last resort. If government were to provide only a reinsurance function that protected against catastrophic losses with a stop loss, then Senator Lugar's plan would likely work and insurance coverage would be widely available. It would really depend on where the stop loss was set in the reinsurance agreement.

This policy would likely raise a new issue because some producers would likely want to cash in the voucher and purchase no insurance. Of course the issue then will be, those same growers would return to Washington asking for disaster assistance. In the 1994 legislation the argument for the CAT contract was for it to provide a minimum level of coverage to all growers and therefore eliminate any future demands for disaster assistance.

A less extreme alternative would be for RMA to continue setting premium rates and a minimum set of underwriting rules. Then allow companies to deviate within specified limits perhaps 3 ½ percent on rates and allow them to add additional underwriting rules. If companies were given that flexibility, then APH, CRC, and RA rates in the Corn Belt would likely decline while rates in Great Plains would likely be increased on average. However, this would not be true for individual growers and the results may be very different. Also, based on current data it is likely that GRIP premium rates would be increased in the Corn Belt.

In the past RMA offered a good experience discount, something that is common in the auto insurance business. If companies will allow some flexibility in rate setting, it is likely some companies will provide good experience discounts. Other companies may offer lower rates in return for accepting additional underwriting rules that require adoption of certain risks reduction technologies. There are perhaps "100 other methods" that no one has even considered but profit motivated companies would find the niche.

Table 1. 1989-2005 Crop Insurance History for USA Crop Insurance, All Crops, All Insurance Plans[1]

St	Aggregate Total Liabilities 000	Liab Rank	Aggre-gate Net Acres 000	Aggregate Total Premium 000	Aggre-gate Total Subsidy 000	Aggre-gate Farmer Paid Premium 000	Aggre-gate Total Indemnity 000	Aggre-gate Total Loss Ratio[2]	Rank Total Loss Ratio	Aggre-gate Total Farmer Loss Ratio[3]	Rank Farm Loss Ratio	Aggre-gate Total Farmer gain[4] 000	Rank Aggre Total Farm gain	Aggre-gate Total Farmer gain/Acre[5]	Rank Aggre Total Farm gain/Acre	Aggre-gate unin-tended Subsidy[6] 000	Rank Extra Sub-sidy
AL	3,984,722	29	14,761	379,684	185,900	193,784	557,818	1.47	6	2.88	19	364,033	14	24.66	7	178,134	6
AK	4,375	50	69	544	396	148	605	1.11	23	4.09	4	457	48	6.57	28	60	29
AZ	1,754,789	33	4,697	95,882	52,385	43,497	130,464	1.36	9	3.00	16	86,967	32	18.52	12	34,583	17
AR	5,752,426	20	59,657	551,836	389,675	162,161	455,240	0.82	38	2.81	23	293,079	18	4.91	36	0	38
CA	30,322,844	4	46,921	1,618,907	1,042,111	576,796	1,113,402	0.69	45	1.93	39	536,606	10	11.44	17	0	30
CO	5,543,751	21	48,042	604,855	322,156	282,699	781,136	1.29	13	2.76	25	498,437	12	10.37	18	176,282	8
CT	601,437	39	279	23,503	15,949	7,554	37,882	1.61	4	5.01	1	30,327	38	108.61	1	14,378	20
DE	365,224	43	2,808	27,093	17,013	10,080	23,853	0.88	33	2.37	31	13,774	42	4.90	37	0	39
FL	20,629,742	8	14,677	834,713	573,146	261,567	940,748	1.13	21	3.60	7	679,181	8	46.27	3	106,035	10
GA	10,416,122	13	34,026	952,684	510,047	442,637	1,287,791	1.35	11	2.91	18	845,153	6	24.84	6	335,107	4
HI	1,130,102	36	299	12,979	8,223	4,756	5,184	0.40	50	1.09	49	428	49	1.43	48	0	48
ID	4,458,370	27	20,542	317,870	167,692	150,178	244,625	0.77	40	1.63	44	94,447	31	4.60	39	0	41
IL	36,234,250	2	198,241	2,017,277	961,882	1,055,395	1,134,229	0.56	49	1.07	50	78,834	33	0.40	50	0	50
IN	16,930,412	10	86,537	1,074,673	504,423	570,250	722,087	0.67	46	1.27	47	151,836	27	1.75	47	0	47
IA	51,602,766	1	274,699	2,788,496	1,220,358	1,568,137	1,785,126	0.64	47	1.14	48	216,989	23	0.79	49	0	49
KS	19,490,966	9	214,192	1,885,440	977,829	907,611	2,170,918	1.15	20	2.39	30	1,263,307	3	5.90	33	285,478	5
KY	4,526,069	26	20,510	301,641	170,150	131,491	257,151	0.85	35	1.96	38	125,659	29	6.13	30	0	34
LA	4,835,489	23	36,748	445,793	288,160	157,633	481,665	1.08	24	3.06	13	324,031	17	8.82	21	35,872	16
ME	558,087	40	1,103	38,459	26,539	11,920	40,303	1.05	26	3.38	11	28,382	39	25.74	5	1,844	26
MD	1,280,765	35	7,850	94,793	59,628	35,165	78,594	0.83	37	2.24	35	43,430	37	5.53	34	0	36
MA	538,891	42	336	22,453	14,401	8,052	36,407	1.62	3	4.52	3	28,355	40	84.50	2	13,954	21
MI	6,912,262	19	40,501	511,034	305,028	206,006	428,456	0.84	36	2.08	37	222,450	22	5.49	35	0	37
MN	35,801,922	3	225,151	2,637,485	1,298,087	1,339,398	2,267,259	0.86	34	1.69	42	927,862	5	4.12	41	0	43
MS	5,412,930	22	41,491	499,228	301,221	198,006	557,153	1.12	22	2.81	22	359,147	15	8.66	22	57,925	15
MO	9,046,834	15	81,730	915,848	542,618	373,230	662,467	0.72	41	1.77	41	289,236	19	3.54	43	0	44
MT	7,070,525	18	172,241	746,121	354,248	391,873	923,463	1.24	18	2.36	32	531,590	11	3.09	45	177,342	7

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1999 to 2005. The 2005 losses are not complete.

[2]Aggregate total loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of premiums paid (includes premium subsidy and premium discounts).

[3]Aggregate total Farmer paid loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[4]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[5]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[6]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 1. Continued. 1989-2005 Crop Insurance History for USA Crop Insurance, All Crops, All Insurance Plans[1]

St	Aggregate Total Liabilities 000	Liab Rank	Aggregate Net Acres 000	Aggregate Total Premium 000	Aggregate Total Subsidy 000	Aggregate Farmer Paid Premium 000	Aggregate Total Indemnity 000	Aggregate Total Loss Ratio[2]	Rank Total Loss Ratio	Aggregate Total Farmer Loss Ratio	Rank Farm Loss Ratio	Aggregate Total Farmer gain 000	Rank Aggre Total Farm gain	Aggregate Total Farmer gain/Acre	Rank Aggre Total Farm gain/Acre	Aggregate Unintended Subsidy 000	Rank Extra Sub-sidy
NV	85,447	47	304	7,415	4,677	2,737	12,732	1.72	1	4.65	2	9,994	45	32.93	4	5,317	23
NH	67,570	48	106	2,767	1,964	803	2,827	1.02	27	3.52	8	2,025	47	19.17	11	61	28
NJ	542,000	41	1,616	26,028	21,303	4,725	18,103	0.70	44	3.83	5	13,378	44	8.28	24	0	33
NM	766,083	38	8,136	95,992	59,945	36,046	97,352	1.01	28	2.70	27	61,305	35	7.54	25	1,360	27
NY	1,690,066	34	7,566	108,798	78,387	30,411	107,070	0.98	30	3.52	9	76,659	34	10.13	20	0	31
NC	13,224,399	12	36,020	784,310	408,520	375,791	1,131,877	1.44	7	3.01	15	756,087	7	20.99	8	347,567	3
ND	23,306,521	7	287,334	2,632,468	1,332,124	1,300,345	3,303,755	1.26	17	2.54	29	2,003,410	2	6.97	27	671,286	2
OH	10,037,264	14	58,837	630,913	319,826	311,087	582,546	0.92	31	1.87	40	271,460	20	4.61	38	0	40
OK	4,811,387	24	68,593	543,887	296,285	247,602	684,553	1.26	15	2.76	24	436,951	13	6.37	29	140,666	9
OR	4,156,633	28	12,343	145,343	81,003	64,340	237,451	1.63	2	3.69	6	173,111	25	14.03	15	92,108	13
PA	1,926,302	32	10,593	177,866	112,627	65,239	212,406	1.19	19	3.26	12	147,167	28	13.89	16	34,539	18
RI	15,760	49	26	674	447	226	381	0.57	48	1.68	43	154	50	6.00	32	0	35
SC	3,405,589	31	13,227	267,099	161,525	105,574	361,617	1.35	10	3.43	10	256,043	21	19.36	10	94,518	12
SD	15,645,865	11	162,495	1,693,746	887,800	805,946	1,797,327	1.06	25	2.23	36	991,380	4	6.10	31	103,580	11
TN	4,608,233	25	18,882	282,136	187,627	94,509	256,088	0.91	32	2.71	26	161,580	26	8.56	23	0	32
TX	26,431,874	6	213,311	3,786,003	2,051,369	1,734,634	4,986,564	1.32	12	2.87	20	3,251,931	1	15.25	14	1,200,562	1
UT	154,150	44	1,942	19,152	9,547	9,605	29,350	1.53	5	3.06	14	19,744	41	10.17	19	10,197	22
VT	100,888	46	628	6,974	4,840	2,134	4,967	0.71	42	2.33	33	2,834	46	4.52	40	0	42
VA	3,729,563	30	12,197	242,744	124,562	118,181	307,565	1.27	14	2.60	28	189,384	24	15.53	13	64,822	14
WA	8,266,648	16	34,266	388,444	217,982	170,462	273,497	0.70	43	1.60	45	103,034	30	3.01	46	0	46
WV	147,378	45	675	16,120	9,315	6,805	20,271	1.26	16	2.98	17	13,466	43	19.95	9	4,151	24
WI	7,876,190	17	48,730	601,732	336,488	265,244	605,324	1.01	29	2.28	34	340,080	16	6.98	26	3,592	25
WY	811,222	37	13,102	59,554	30,648	28,906	82,359	1.38	8	2.85	21	53,453	36	4.08	42	22,805	19
US	446,499,985		2,839,049	33,983,718	18,043,704	15,940,013	33,893,434	1.00		2.13		17,953,420		6.32		4,214,125	

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1999 to 2005. The 2005 losses are not complete.

[2]Aggregate total loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of premiums paid (includes premium subsidy and premium discounts).

[3]Aggregate total Farmer paid loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[4]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[5]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[6]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 2. 1999-2005 Illinois, Indiana, & Iowa Crop Insurance History for Corn by Insurance Plans[1]

St	Type of Policy[2]	Poli-ces Sold	Aggregate Total Liabilities 000	Aggregate Net Acres 000	Aggregate Total Premium 000	Aggregate Total Subsidy 000	Aggregate Farmer Paid Premium 000	Aggregate Total Indemnity 000	Aggregate Total Loss Ratio[3]	Aggregate Total Farmer Loss Ratio[4]	Aggregate Total Farmer gain[5] 000	Aggregate Total Farmer gain/ Acre[6]	Aggregate unintended Subsidy[7] 000
IL	GRIP	6,090	891,262	1,710	55,452	30,856	24,596	88,498	1.60	3.60	63,902	37.36	33,046
IN	GRIP	9,990	1,167,604	2,377	70,051	37,091	32,961	58,945	0.84	1.79	25,984	10.93	0
IA	GRIP	1,856	241,459	529	16,021	8,999	7,022	9,290	0.58	1.32	2,269	4.29	0
	Total	17,936	2,300,324	4,616	141,524	76,945	64,579	156,734	1.11				
IL	GRP	6,049	690,928	1,525	22,428	11,801	10,626	4,213	0.19	0.40	(6,413.52)	(4.21)	0
IN	GRP	8,999	889,782	2,208	27,559	12,078	15,481	13,399	0.49	0.87	(2,081.85)	(0.94)	0
IA	GRP	10,059	750,787	2,085	17,831	9,148	8,683	402	0.02	0.05	(8,280.87)	(3.97)	0
	Total	25,107	2,331,496	5,818	67,817	33,028	34,789	18,013	0.27				
IL	APH	291,436	9,874,864	37,330	755,325	344,670	410,656	361,231	0.48	0.88	(49,424.58)	(1.32)	0
IN	APH	106,998	4,226,572	16,623	376,311	171,203	205,108	235,215	0.63	1.15	30,106.96	1.81	0
IA	APH	414,182	14,584,825	57,189	1,088,125	511,488	576,637	365,579	0.34	0.63	(211,057.61)	(3.69)	0
	Total	812,616	28,686,262	111,142	2,219,761	1,027,361	1,192,401	962,026	0.43				

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1999 to 2005. The 2005 losses are not complete.

[2]Analysis includes coverages greater than 70% only. APH polices includes APH, CRC and RA policies.

[3]Aggregate total loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of premiums paid (includes premium subsidy and premium discounts).

[4]Aggregate total Farmer paid loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[5]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[6]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[7]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 3. Rawlins County, KS Wheat GRP and GRIP Historical Simulated Indemnity Payments based on 30 Years of Trend Adjusted Yields (No Practice Specified)

RMA's 2005 Expected County Yield   36.4
KSU's 2005 Expected County Yield   33.6
    150% Maximum Liability

Plan Year	Havst Year	County[1] Yield	Planted Yield	KSU Trend Adj. Expect Yield	RMA Set Trend Adj. Yield	90% Cov GRP Pymt Rate	APH[2] Price	GRP Pymt	7.81% GRP Prem	Plant[3] Price	rvest Price	90% Coverage GRIP Pymt Rate	GRIP Pymt	9.50% GRIP[4] Prem	90% GRIP-HRO Pymt Rate	GRIP-HRO Pymt	11.45% GRIP-HRO[3] Prem
1972	1973	36.9	36.3	28.6		0.0%	2.00	0.00	6.71	1.88	2.59	0.0%	0.00	7.67	0.0%	0.00	9.24
1973	1974	30.1	29.2	30.4		0.0%	2.00	0.00	7.12	3.75	4.05	0.0%	0.00	16.24	0.0%	0.00	19.58
1974	1975	34.5	32.5	30.6		0.0%	2.50	0.00	8.97	4.38	3.15	15.2%	30.63	19.12	15.2%	30.63	23.04
1975	1976	37.2	36.2	31.9		0.0%	2.50	0.00	9.36	4.28	3.76	0.0%	0.00	19.47	0.0%	0.00	23.47
1976	1977	32.7	29.3	33.6		3.1%	2.50	3.86	9.83	3.56	2.36	35.9%	64.28	17.03	35.9%	64.28	20.52
1977	1978	32.0	28.7	34.3		7.0%	2.50	9.07	10.05	2.50	3.05	0.0%	0.00	12.21	7.0%	11.06	14.71
1978	1979	37.1	29.2	34.5		6.1%	3.00	9.49	12.14	3.06	4.09	0.0%	0.00	15.06	6.1%	12.94	18.15
1979	1980	40.5	38.3	33.9		0.0%	3.50	0.00	13.89	4.25	4.09	0.0%	0.00	20.53	0.0%	0.00	24.75
1980	1981	22.2	18.2	35.4		42.9%	3.50	79.85	14.52	4.88	4.22	50.7%	131.35	24.63	50.7%	131.35	29.69
1981	1982	34.7	34.2	33.4		0.0%	4.50	0.00	17.63	4.56	3.64	9.2%	21.04	21.72	9.2%	21.04	26.17
1982	1983	45.0	40.1	34.6		0.0%	4.00	0.00	16.23	3.92	3.58	0.0%	0.00	19.37	0.0%	0.00	23.35
1983	1984	38.2	23.1	35.6		27.9%	4.00	59.64	16.67	4.05	3.65	35.1%	75.85	20.53	35.1%	75.85	24.75
1984	1985	57.2	53.5	33.9		0.0%	3.75	0.00	14.88	3.54	3.20	0.0%	0.00	17.07	0.0%	0.00	20.58
1985	1986	39.5	37.1	37.0		0.0%	3.30	0.00	14.29	2.74	2.44	1.0%	1.56	14.44	1.0%	1.56	17.41
1986	1987	41.7	39.8	36.5		0.0%	2.60	0.00	11.13	2.39	2.64	0.0%	0.00	12.44	0.0%	0.00	14.99
1987	1988	36.2	30.7	37.2		8.3%	2.60	12.08	11.32	2.78	3.79	0.0%	0.00	14.73	8.3%	17.61	17.75
1988	1989	20.5	15.3	37.4		54.5%	3.00	91.78	13.16	3.65	4.14	48.3%	98.94	19.45	54.5%	126.65	23.45
1989	1990	44.2	43.7	35.1		0.0%	3.45	0.00	14.20	3.69	3.29	0.0%	0.00	18.47	0.0%	0.00	22.26
1990	1991	31.4	29.8	37.7		12.2%	3.00	20.62	13.25	3.07	2.86	18.2%	31.68	16.49	18.2%	31.68	19.88
1991	1992	27.9	21.7	37.4		35.5%	3.00	59.65	13.14	3.05	3.59	23.9%	40.89	16.24	35.5%	71.44	19.57
1992	1993	41.6	36.6	35.9		0.0%	3.00	0.00	12.61	3.20	2.87	0.0%	0.00	16.37	0.0%	0.00	19.73
1993	1994	40.4	38.7	35.8		0.0%	3.25	0.00	13.64	3.00	3.37	0.0%	0.00	15.34	0.0%	0.00	18.49
1994	1995	42.9	41.9	36.0		0.0%	3.35	0.00	14.14	3.52	4.24	0.0%	0.00	18.08	0.0%	0.00	21.79
1995	1996	28.3	25.8	36.4		21.3%	3.55	41.33	15.16	3.91	5.76	0.0%	0.00	20.29	21.3%	67.06	24.46
1996	1997	37.6	35.2	34.9	36.9	0.0%	3.85	0.00	16.64	4.13	3.64	6.4%	14.52	21.69	6.4%	14.52	26.15
1997	1998	50.4	47.5	34.8	37.2	0.0%	3.65	0.00	15.91	3.95	3.04	0.0%	0.00	20.94	0.0%	0.00	25.24
1998	1999	49.7	47.9	35.8	37.5	0.0%	3.30	0.00	14.50	3.16	2.84	0.0%	0.00	16.87	0.0%	0.00	20.33
1999	2000	30.3	28.8	37.3	35.0	8.5%	3.15	14.05	12.92	3.34	3.02	17.3%	30.37	16.67	17.3%	30.37	20.09
2000	2001	42.8	40.2	36.0	35.1	0.0%	2.80	0.00	11.51	3.31	3.07	0.0%	0.00	16.56	0.0%	0.00	19.95
2001	2002	30.9	28.7	37.4	35.2	9.5%	3.15	15.85	12.99	3.34	3.09	16.3%	28.75	16.75	16.3%	28.75	20.19
2002	2003	41.9	40.9	36.7	36.8	0.0%	3.15	0.00	13.58	3.73	3.14	0.0%	0.00	19.56	0.0%	0.00	23.58
2003	2004	16.3	5.5	37.8	37.0	83.6%	3.35	155.45	14.52	3.40	3.77	81.8%	154.40	17.93	83.6%	174.94	21.61
2004	2005	33.6	30.0	33.6	36.4	8.4%	3.50	16.10	14.92	3.56	3.28	15.6%	30.38	18.47	15.6%	30.38	22.26

Total Farmer Paid Premium; Indemnity Payment							588.8	194.2					754.6	260.29		942.1	313.7
Farmer Paid Loss Ratio								3.03						2.90			3.00
Frequency of Claim								42%						42%			55%
Total Premium Including Subsidizes								431.5						578.43			697.2
Industry Loss Ratio								1.36						1.30			1.35
Break Even Premium Rate								10.66%						12.39%			15.47%

[1]NASS county yields for the 2006 wheat harvest will not be released until about April of 2007. Any GRIP/GRP claims will only be paid after the NASS county yield is
[2]MPCI-APH and GRP in the past used different price elections. This year GRP will use the MPCI-APH announced price but not the market price if one is offered. In future
[3]The RMA has converted the future GRIP price elections to the CRC price elections. There is also a $2.00 price limit move up or down.
[4]The assumed price volatility factor of 0.20 was used to calculate GRIP and GRIP-HRO premiums. Like price elections the volatility is reset each year.

Table 4. Government Payments, Indemnity Payments + Corn Sales, 86.7 bushels Yield and $1.93 Price and a Companion Disaster Assistance Program (CDAP)

#		Traditional Disaster Aid				Companion Disaster Assistance			
		No Ins.	MPCI	CRC/ RA-HPO	RA	No Ins.	MPCI	CRC/ RA-HPO	RA
1	**Production & Sales**								
2	APH/Historical Yield	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3
3	Current Year's Crop (bu)	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
4	Harvest Average Price	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
5	Gross Sales	167.27	167.27	167.27	167.27	167.27	167.27	167.27	167.27
6	**Crop Insurance**								
7	Coverage Level		70%	70%	70%		70%	70%	70%
8	Bushels Guaranteed		93.3	93.3	93.3		93.3	93.3	93.3
9	Price Election\Base Price		2.20	2.32	2.32		2.20	2.32	2.32
10	$ of Coverage \ Acre		205.26				205.26		
11	Min Revenue Guarantee			216.53	216.53			216.53	216.53
12	Final Guarantee			216.53	216.53			216.53	216.53
13	Lost Bushels		6.6				6.6		
14	Revenue to Count			167.27	167.27			167.27	167.27
15	Indemnity Payment		14.59	49.26	49.26		14.59	49.26	49.26
16	Less Farmer Paid Premium[1]		6.16	10.83	8.66		6.16	10.83	8.66
17	Net Indemnity Payment		8.43	38.43	40.60		8.43	38.43	40.60
18	Sales and Indemnity Payments	167.27	175.70	205.70	207.87	167.27	175.70	205.70	207.87
19	Non-harvest Expenses[2]	297.18	297.18	297.18	297.18	297.18	297.18	297.18	297.18
20	Harvest Expenses	34.27	34.27	34.27	34.27	34.27	34.27	34.27	34.27
21	Net to Labor and Management	(164.18)	(155.75)	(125.75)	(123.58)	(164.18)	(155.75)	(125.75)	(123.58)
22	**Ad Hoc Disaster Assistance**								
23	Traditional Disaster Aid (TDA)[3]	65%	65%	65%	65%				
24	TDA Bu. Pymt Trigger Yield	86.7	86.7	86.7	86.7				
25	TDA Payment Bushels	0.0	0.0	0.0	0.0				
26	Enter MPCI Price Election	2.20	2.20	2.20	2.20				
27	% MPCI Price Election	50%	50%	50%	50%				
28	TDA Payment Rate per lost bu.	1.10	1.10	1.10	1.10				
29	TDA Payment	0.00	0.00	0.00	0.00				
30	Companion Coverage (CDAP)[4]					80%	80%	80%	80%
31	CDAP Bu. Pymt Trigger Yield					106.7	106.7	106.7	106.7
32	Stop Payment Yield (55% loss)[5]					60.0	60.0	60.0	60.0
33	CDAP Payment Bushels					20.0	20.0	20.0	20.0
34	$ CDAP Paid					22.00	22.00	22.00	22.00
35	Net with Disaster Aid	(164.18)	(155.75)	(125.75)	(123.58)	(142.18)	(133.75)	(103.75)	(101.58)

[1]The farmer paid premium was calculated based on the Kansas average farmer paid premium rate for MCPI-APH, CRC and RA times the example farm's insurance liability. The average Kansas farmer paid 2005 premium rate for corn was approximately 3% for MPCI-APH, 5% for CRC, and 4% for RA.

[2]Source: Fogleman, S. L. and S. R. Duncan, Corn Cost-Return Budget in Northeast Kansas, MF-571, Department of Agricultural Economics, Agricultural Experiment Station and Cooperative Extension Service, Kansas State University, October, 2005.

[3]The Traditional Disaster Aid maximum payment as defined in past programs will equal 133 bushels times 65% times 50% of the $2.20 MPCI-APH price election set in 2005.

[4]The Companion Disaster Assistance Program coverage level was set at an arbitrary coverage level of 80%. One could increase the deductible from 20% or lower the percent of price payment rate to a lower USDA budget costs.

[5]The Companion Disaster Assistance Program stop loss was set at a 55% yield loss assuming losses greater than 55% would be covered under crop insurance because most contracts including CAT trigger with a 50% or less yield loss.

Table 5. Government Payments, Indemnity Payments + Corn Sales, a Zero Yield and $1.93 Price and a Companion Disaster Assistance Program (CDAP)

#		Traditional Disaster Aid				Companion Disaster Assistance			
		No Ins.	MPCI	CRC/ RA-HPO	RA	No Ins.	MPCI	CRC/ RA-HPO	RA
1	**Production & Sales**								
2	APH/Historical Yield	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3
3	Current Year's Crop (bu)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Harvest Average Price	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
5	Gross Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	**Crop Insurance**								
7	Coverage Level		70%	70%	70%		70%	70%	70%
8	Bushels Guaranteed		93.3	93.3	93.3		93.3	93.3	93.3
9	Price Election\Base Price		2.20	2.32	2.32		2.20	2.32	2.32
10	$ of Coverage \ Acre		205.26				205.26		
11	Min Revenue Guarantee			216.53	216.53			216.53	216.53
12	Final Guarantee			216.53	216.53			216.53	216.53
13	Lost Bushels		93.3				93.3		
14	Revenue to Count			0.00	0.00			0.00	0.00
15	Indemnity Payment		205.26	216.53	216.53		205.26	216.53	216.53
16	Less Farmer Paid Premium[1]		6.16	10.83	8.66		6.16	10.83	8.66
17	Net Indemnity Payment		199.10	205.70	207.87		199.10	205.70	207.87
18	Sales and Indemnity Payments	0.00	199.10	205.70	207.87	0.00	199.10	205.70	207.87
19	Non-harvest Expenses[2]	297.18	297.18	297.18	297.18	297.18	297.18	297.18	297.18
20	Harvest Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Net to Labor and Management	(297.18)	(98.08)	(91.48)	(89.31)	(297.18)	(98.08)	(91.48)	(89.31)
22	**Ad Hoc Disaster Assistance**								
23	Traditional Disaster Aid (TDA)[3]	65%	65%	65%	65%				
24	TDA Bu. Pymt Trigger Yield	86.7	86.7	86.7	86.7				
25	TDA Payment Bushels	86.7	86.7	86.7	86.7				
26	Enter MPCI Price Election	2.20	2.20	2.20	2.20				
27	% MPCI Price Election	50%	50%	50%	50%				
28	TDA Payment Rate per lost bu.	1.10	1.10	1.10	1.10				
29	TDA Payment	95.33	95.33	95.33	95.33				
30	Companion Coverage (CDAP)[4]					80%	80%	80%	80%
31	CDAP Bu. Pymt Trigger Yield					106.7	106.7	106.7	106.7
32	Stop Payment Yield (55% loss)[5]					60.0	60.0	60.0	60.0
33	CDAP Payment Bushels					60.0	60.0	60.0	60.0
34	$ CDAP Paid					66.00	66.00	66.00	66.00
35	Net with Disaster Aid	(201.85)	(2.75)	3.85	6.02	(231.18)	(32.08)	(25.48)	(23.31)

[1]The farmer paid premium was calculated based on the Kansas average farmer paid premium rate for MCPI-APH, CRC and RA times the example farm's insurance liability. The average Kansas farmer paid 2005 premium rate for corn was approximately 3% for MPCI-APH, 5% for CRC, and 4% for RA.

[2]Source: Fogleman, S. L. and S. R. Duncan, Corn Cost-Return Budget in Northeast Kansas, MF-571, Department of Agricultural Economics, Agricultural Experiment Station and Cooperative Extension Service, Kansas State University, October, 2005.

[3]The Traditional Disaster Aid maximum payment as defined in past programs will equal 133 bushels times 65% times 50% of the $2.20 MPCI-APH price election set in 2005.

[4]The Companion Disaster Assistance Program coverage level was set at an arbitrary coverage level of 80%. One could increase the deductible from 20% or lower the percent of price payment rate to a lower USDA budget costs.

[5]The Companion Disaster Assistance Program stop loss was set at a 55% yield loss assuming losses greater than 55% would be covered under crop insurance because most contracts including CAT trigger with a 50% or less yield loss.

Table 6. 1989-2005 USA Crop Insurance History for Corn, All Insurance Plans[1]

St	Aggregate NASS Planted Acre[2] 000	Rank Plant Ac	Aggregate Total Liabilities 000	Liab Rank	Aggregate Net Acres 000	Aggregate Total Premium 000	Aggregate Total Subsidy 000	Aggregate Farmer Paid Premium 000	Aggregate Total Indemnity 000	Aggregate Total Loss Ratio[3]	Rank Total Loss Ratio	Aggregate Total Farmer Loss Ratio[4]	Rank Farm Loss Ratio	Aggregate Total Farmer gain[5] 000	Rank Aggre Total Farm gain	Aggregate Total Farmer gain/Acre[6]	Rank Aggre Total Farm gain/Acre	Aggregate unintended Subsidy[7] 000	Rank Extra Subsidy
AL	4,320	27	162,056		1,796	19,686	10,983	8,703	17,510	0.89	21	2.01	29	8,807	27	4.90	24	0	24
AZ	678	41	34,698		290	1,677	1,491	186	672	0.40	39	3.62	5	486	39	1.68	35	0	35
AR	2,962	29	160,356		1,646	21,878	15,139	6,739	22,240	1.02	14	3.30	6	15,501	25	9.41	8	363	12
CA	8,100	23	196,302		1,866	6,338	5,627	711	3,099	0.49	38	4.36	2	2,388	34	1.28	37	0	37
CO	18,540	16	2,157,985		11,406	180,430	92,047	88,383	254,441	1.41	1	2.88	11	166,058	8	14.56	1	74,011	2
DE	2,808	30	157,083		1,023	13,764	8,388	5,376	13,186	0.96	17	2.45	18	7,810	28	7.63	13	0	16
FL	1,785	34	32,470		459	4,430	2,695	1,735	4,199	0.95	19	2.42	19	2,465	33	5.36	22	0	22
GA	8,110	22	287,979		3,480	37,703	22,307	15,396	40,330	1.07	9	2.62	15	24,934	20	7.17	15	2,627	9
ID	2,530	31	43,757		319	1,995	1,393	602	1,726	0.87	22	2.87	12	1,124	36	3.52	28	0	28
IL	188,150	2	22,073,789		104,387	1,280,685	588,753	691,931	735,173	0.57	36	1.06	39	43,242	15	0.41	39	0	39
IN	97,000	5	9,720,935		43,759	633,856	291,508	342,348	445,953	0.70	30	1.30	37	103,605	11	2.37	33	0	33
IA	**211,400**	**1**	**32,005,512**		**153,199**	**1,835,780**	**796,973**	**1,038,807**	**1,080,952**	**0.59**	**35**	**1.04**	**40**	**42,145**	**16**	**0.28**	**40**	**0**	**40**
KS	44,270	9	5,216,864		29,769	403,238	212,897	190,341	447,594	1.11	8	2.35	20	257,252	3	8.64	12	44,355	4
KY	22,010	14	1,298,506		8,409	109,019	60,662	48,357	68,433	0.63	33	1.42	35	20,076	23	2.39	32	0	32
LA	6,300	25	526,177		4,729	53,727	33,508	20,220	64,215	1.20	7	3.18	8	43,995	14	9.30	10	10,487	7
MD	8,440	20	496,195		3,381	52,837	31,691	21,146	44,618	0.84	25	2.11	25	23,471	21	6.94	19	0	19
MI	40,300	11	2,361,588		17,515	189,081	113,127	75,954	121,484	0.64	32	1.60	33	45,529	13	2.60	31	0	31
MN	118,800	4	15,241,987		84,097	1,120,304	561,315	558,989	693,791	0.62	34	1.24	38	134,802	10	1.60	36	0	36
MS	6,430	24	331,179		3,859	37,606	26,368	11,238	24,940	0.66	31	2.22	22	13,702	26	3.55	27	0	27
MO	43,500	10	3,506,521		25,061	396,306	224,282	172,023	308,470	0.78	27	1.79	32	136,447	9	5.44	21	0	21
MT	1,103	37	45,737		363	4,000	2,295	1,705	3,395	0.85	24	1.99	30	1,690	35	4.66	25	0	25

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1989 to 2005. The 2005 losses are not complete.

[2]Source: National Agricultural Statistics Service, USDA, Washington, D.C., WEB page http://www.nass.usda.gov/, for years 1989 to 2005. Only states with NASS reported planted acres were included in the analysis.

[3]Aggregate total loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of premiums paid (includes premium subsidy and premium discounts).

[4]Aggregate total Farmer paid loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[5]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[6]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[7]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 6. Continued. 1989-2005 USA Crop Insurance History for Corn, All Insurance Plans[1]

St	Aggregate NASS Planted Acre[2] 000	Rank Plant Ac	Aggregate Total Liabilities 000	Liab Rank	Aggregate Net Acres 000	Aggregate Total Premium 000	Aggregate Total Subsidy 000	Aggregate Farmer Paid Premium 000	Aggregate Total Indemnity 000	Aggregate Total Loss Ratio[3]	Rank Total Loss Ratio	Aggregate Total Farmer Loss Ratio[4]	Rank Farm Loss Ratio	Aggregate Total Farmer gain[5] 000	Rank Aggre Total Farm gain	Aggregate Total Farmer gain/Acre[6]	Rank Aggre Total Farm gain/Acre	Aggregate unintended Subsidy[7] 000	Rank Extra Subsidy
NE	140,850	3	18,620,751		95,744	1,229,806	592,561	637,245	939,026	0.76	28	1.47	34	301,780	2	3.15	29	0	29
NJ	1,657	35	57,731		572	5,511	3,961	1,550	5,633	1.02	13	3.63	4	4,082	31	7.13	17	122	14
NM	2,111	33	128,364		869	10,866	7,664	3,201	2,770	0.25	41	0.87	41	-431	41	(0.50)	41	0	41
NY	18,680	15	381,974		4,488	29,408	23,062	6,346	23,703	0.81	26	3.74	3	17,357	24	3.87	26	0	26
NC	15,340	18	824,772		7,292	93,266	52,142	41,124	79,853	0.86	23	1.94	31	38,729	17	5.31	23	0	23
ND	17,060	17	1,458,809		13,859	228,682	128,046	100,636	284,242	1.24	6	2.82	14	183,606	6	13.25	3	55,560	3
OH	59,050	8	4,652,449		24,307	307,332	152,210	155,122	323,883	1.05	10	2.09	28	168,760	7	6.94	18	16,550	6
OK	3,620	28	307,508		1,961	28,405	16,266	12,139	35,516	1.25	4	2.93	10	23,377	22	11.92	5	7,111	8
OR	841	40	23,727		187	1,069	789	281	795	0.74	29	2.83	13	514	38	2.74	30	0	30
PA	24,340	13	937,454		7,192	114,041	70,018	44,022	141,921	1.24	5	3.22	7	97,898	12	13.61	2	27,880	5
SC	5,570	26	246,116		2,810	41,460	24,701	16,758	43,136	1.04	11	2.57	17	26,378	19	9.39	9	1,677	11
SD	65,650	6	6,541,632		50,658	719,216	378,902	340,314	717,587	1.00	15	2.11	26	377,273	1	7.45	14	0	17
TN	11,430	19	495,484		3,985	48,487	29,986	18,501	25,289	0.52	37	1.37	36	6,788	29	1.70	34	0	34
TX	32,910	12	2,857,724		21,456	285,797	161,797	124,000	380,090	1.33	2	3.07	9	256,089	4	11.94	4	94,292	1
UT	1,060	39	10,842		86	834	596	238	1,084	1.30	3	4.56	1	847	37	9.86	6	250	13
VA	8,320	21	562,644		3,843	67,679	34,697	32,982	70,263	1.04	12	2.13	24	37,281	18	9.70	7	2,584	10
WA	2,415	32	61,699		480	1,905	1,668	237	612	0.32	40	2.58	16	375	40	0.78	38	0	38
WV	1,101	38	52,572		421	6,181	3,594	2,587	5,589	0.90	20	2.16	23	3,002	32	7.14	16	0	18
WI	62,550	7	4,180,756		27,066	371,047	201,763	169,284	354,239	0.95	18	2.09	27	184,955	5	6.83	20	0	20
WY	1,470	36	85,831		604	9,420	5,517	3,902	9,161	0.97	16	2.35	21	5,258	30	8.71	11	0	15
US	1,313,561		138,546,517		768,693	10,004,751	4,993,391	5,011,360	7,840,809	0.78		1.56		2,829,449		3.68		337,869	

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1989 to 2005. The 2005 losses are not complete.

[2]Source: National Agricultural Statistics Service, USDA, Washington, D.C., WEB page http://www.nass.usda.gov/, for years 1989 to 2005. Only states with NASS reported planted acres were included in the analysis.

[3]Aggregate total loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of premiums paid (includes premium subsidy and premium discounts).

[4]Aggregate total Farmer paid loss ratio is the sum of the 7 years of indemnity payments divided by the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[5]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[6]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[7]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 7. 1989-2005 USA Crop Insurance History for Wheat, All Insurance Plans[1]

St	Aggre-gate NASS Planted Acre[2] 000	Rank Plant Ac	Aggregate Total Liabilities 000	Liab Rank	Aggre-gate Net Acres 000	Aggregate Total Premium 000	Aggre-gate Total Subsidy 000	Aggre-gate Farmer Paid Premium 000	Aggre-gate Total Indemnity 000	Aggre-gate Total Loss Ratio[3]	Rank Total Loss Ratio	Aggre-gate Total Farmer Loss Ratio[4]	Rank Farm Loss Ratio	Aggre-gate Total Farmer gain[5] 000	Rank Aggre Total Farm gain	Aggre-gate Total Farmer gain/Acre[6]	Rank Aggre Total Farm gain/Acre	Aggre-gate unin-tended Subsidy[7] 000	Rank Extra Sub-sidy
AL	2,625	34	32,558	34	571	3,027	1,634	1,393	4,678	1.55	7	3.36	13	3,286	32	5.75	15	1,651	21
AZ	1,838	36	104,415	27	749	5,211	3,188	2,023	6,687	1.28	15	3.31	15	4,664	30	6.23	10	1,476	22
AR	17,030	15	404,113	16	7,709	50,815	34,226	16,589	62,236	1.22	19	3.75	6	45,647	11	5.92	12	11,421	11
CA	11,127	17	378,974	17	4,500	47,926	31,242	16,684	59,737	1.25	16	3.58	10	43,053	12	9.57	5	11,811	10
CO	45,798	7	1,822,842	10	28,419	283,067	150,907	132,160	350,407	1.24	17	2.65	21	218,247	7	7.68	7	67,340	6
DE	1,137	37	14,386	37	202	344	220	124	454	1.32	12	3.66	8	330	40	1.63	40	110	29
FL	492	40	7,763	39	119	856	405	450	1,583	1.85	2	3.51	12	1,133	38	9.51	6	727	27
GA	6,830	24	139,127	23	2,306	12,692	6,846	5,847	11,519	0.91	30	1.97	36	5,673	27	2.46	33	0	34
ID	23,440	11	1,088,591	12	9,396	73,338	35,577	37,760	60,082	0.82	34	1.59	41	22,322	17	2.38	34	0	35
IL	21,140	13	427,747	13	5,649	38,758	21,462	17,296	43,191	1.11	26	2.50	24	25,895	13	4.58	19	4,432	15
IN	11,100	18	191,808	20	2,234	12,185	6,228	5,958	14,821	1.22	20	2.49	26	8,863	22	3.97	23	2,636	18
IA	767	38	7,660	40	111	1,198	486	711	1,866	1.56	6	2.62	23	1,154	37	10.40	4	668	28
KS	**188,000**	**1**	**8,727,674**	**2**	**123,059**	**870,329**	**443,312**	**427,017**	**958,125**	**1.10**	**27**	**2.24**	**32**	**531,108**	**2**	**4.32**	**21**	**87,796**	**4**
KY	10,240	21	170,747	21	2,265	12,665	8,223	4,442	8,984	0.71	41	2.02	35	4,542	31	2.01	36	0	37
LA	3,190	30	93,144	29	1,594	14,715	8,086	6,629	23,907	1.62	5	3.61	9	17,278	18	10.84	3	9,192	12
MD	3,500	29	54,811	33	767	1,654	1,118	537	2,454	1.48	8	4.57	1	1,917	34	2.50	32	800	25
MI	10,270	20	307,675	18	3,307	20,729	11,825	8,904	16,515	0.80	38	1.85	39	7,611	25	2.30	35	0	36
MN	39,010	9	2,556,605	7	30,898	283,816	141,999	141,816	330,077	1.16	21	2.33	30	188,261	8	6.09	11	46,261	7
MS	4,280	27	98,435	28	1,792	11,825	6,995	4,830	17,285	1.46	9	3.58	11	12,455	20	6.95	9	5,460	13
MO	22,050	12	414,629	14	7,282	43,655	28,047	15,608	38,954	0.89	31	2.50	25	23,346	16	3.21	29	0	31
MT	96,310	5	5,017,198	3	82,093	552,004	253,808	298,197	623,696	1.13	23	2.09	34	325,500	4	3.97	24	71,692	5
NE	35,250	10	1,843,159	9	24,446	191,245	91,284	99,961	192,141	1.00	29	1.92	37	92,180	10	3.77	27	896	24

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1989 to 2005. The 2005 losses are not complete.

[2]Source: National Agricultural Statistics Service, USDA, Washington, D.C., WEB page http://www.nass.usda.gov/, for years 1989 to 2005. Only states with NASS reported planted acres were included in the analysis.

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[5]Aggregate total farmer gain is the sum of the 7 years of indemnity payments less the sum of the 7 years of farmer paid premiums (Does NOT included premium subsidy or discounts).

[6]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[7]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

Table 7. Continued. 1989-2005 USA Crop Insurance History for Wheat, All Insurance Plans[1]

St	Aggregate NASS Planted Acre[2] 000	Rank Plant Ac	Aggregate Total Liabilities 000	Liab Rank	Aggregate Net Acres 000	Aggregate Total Premium 000	Aggregate Total Subsidy 000	Aggregate Farmer Paid Premium 000	Aggregate Total Indemnity 000	Aggregate Total Loss Ratio[3]	Rank Total Loss Ratio	Aggregate Total Farmer Loss Ratio[4]	Rank Farm Loss Ratio	Aggregate Total Farmer gain[5] 000	Rank Aggre Total Farm gain	Aggregate Total Farmer gain/ Acre[6]	Rank Aggre Total Farm gain/ Acre	Aggregate unintended Subsidy[7] 000	Rank Extra Subsidy
NV	253	41	10,579	38	90	1,331	686	645	2,380	1.79	3	3.69	7	1,735	35	19.35	1	1,048	23
NJ	646	39	5,635	41	111	177	152	25	115	0.65	42	4.52	2	89	41	0.81	42	0	42
NM	8,260	23	152,337	22	4,093	31,191	19,018	12,173	35,796	1.15	22	2.94	19	23,623	15	5.77	14	4,605	14
NY	2,160	35	27,321	36	485	1,398	1,137	262	1,112	0.80	39	4.25	3	850	39	1.75	39	0	40
NC	10,790	19	247,220	19	3,853	19,860	12,488	7,371	22,420	1.13	24	3.04	16	15,049	19	3.91	26	2,561	20
ND	176,530	2	10,717,807	1	160,299	1,143,873	548,301	595,572	1,410,385	1.23	18	2.37	29	814,813	1	5.08	17	266,512	1
OH	19,020	14	411,748	15	4,357	20,290	11,176	9,114	17,326	0.85	33	1.90	38	8,212	24	1.88	37	0	38
OK	113,300	3	3,084,343	4	56,299	374,003	203,864	170,139	420,123	1.12	25	2.47	27	249,984	5	4.44	20	46,120	8
OR	16,255	16	1,183,514	11	10,009	84,536	33,476	51,060	196,087	2.32	1	3.84	5	145,027	9	14.49	2	111,551	3
PA	3,125	31	29,222	35	363	1,155	692	463	1,892	1.64	4	4.09	4	1,430	36	3.93	25	737	26
SC	4,655	25	105,822	26	1,883	9,037	6,053	2,984	7,949	0.88	32	2.66	20	4,965	28	2.64	31	0	33
SD	59,816	6	2,537,779	8	45,039	367,640	191,248	176,392	400,330	1.09	28	2.27	31	223,938	6	4.97	18	32,690	9
TN	8,370	22	76,512	30	1,527	8,921	6,529	2,392	7,128	0.80	37	2.98	18	4,736	29	3.10	30	0	32
TX	104,400	4	2,801,817	5	56,394	469,117	257,080	212,036	644,404	1.37	11	3.04	17	432,367	3	7.67	8	175,287	2
UT	2,991	33	67,200	32	1,303	8,816	4,510	4,307	11,398	1.29	13	2.65	22	7,092	26	5.44	16	2,582	19
VA	4,430	26	127,152	25	1,445	8,422	4,828	3,594	11,985	1.42	10	3.33	14	8,391	23	5.81	13	3,564	17
WA	45,380	8	2,684,044	6	25,249	136,387	55,108	81,279	105,056	0.77	40	1.29	42	23,777	14	0.94	41	0	41
WV	216	42	3,016	42	41	172	108	64	140	0.81	35	2.18	33	76	42	1.85	38	0	39
WI	3,000	32	71,169	31	818	7,219	4,081	3,138	5,812	0.81	36	1.85	40	2,674	33	3.27	28	0	30
WY	3,628	28	132,992	24	2,423	12,883	6,018	6,864	16,553	1.28	14	2.41	28	9,689	21	4.00	22	3,671	16
US	1,142,649		48,381,290		715,550	5,238,482	2,653,675	2,584,808	6,147,793	1.17		2.38		3,562,985		4.98		975,299	

[1]Source: Risk Management Agency, USDA, Washington, D.C., WEB Page: http://www.rma.usda.gov/data/, for years 1989 to 2005. The 2005 losses are not complete.

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[6]Aggregate total farmer gain per acre is the aggregate total farmer gain divided by the sum of the 7 years of insured acres.

[7]Aggregate unintended subsidy is the amount that the 7 year total indemnity payments exceed the 7 year total premium payments paid (includes premium subsidy and premium discounts).

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AWARDS:

Dr. Barnaby was the winner of the American Agricultural Economics Association's 2001 Individual Distinguished Extension Program Award for his grower education on combining revenue insurance with marketing tools to manage risk. This is generally accepted as the top award for extension and his risk management approach has been widely adopted by growers, marketing consultants, insurance agents and other extensions services.

Dr. Barnaby also cooperated with Professors Dean Baldwin, Ohio State University and Robert Wisner, Iowa State University on a series of risk management educational programs in the Corn Belt. This educational program was awarded the American Agricultural Economics Association's 2000 Group Distinguished Extension Program Award.

National Association of Wheat Growers, Excellence in Extension Award, 1990.

American Agricultural Economics Association, Distinguished Individual Extension Program Award, 1991.

MAST Team Award, 2003.

Western Agricultural Economics Association Outstanding Extension Project Award, 2004

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Barnaby, G.A., <u>Current New Crop Prices and Crop Insurance Participation</u>, Department of Agricultural Economics, K-State Research & Extension, Kansas State University, Manhattan, KS 66506. Presented to Secretary Dan Glickman=s Working Group, Washington, DC, August 24, 1998.

Barnaby, G.A., Risk Assessed Marketing (RAM), An Extension Education Program on Managing Price and Yield Risk, Department of Agricultural Economics, K-State Research & Extension, Kansas State University, Manhattan, KS 66506. Presented to the American Agricultural Economics Association Pre-Conference Workshop, Salt Lake City, UT, August 1, 1998.

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Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2004.

Name: G.A. (ART) BARNABY, JR.

Address: DEPT. OF AG ECONOMICS
                 304 WATERS HALL
                 KANSAS STATE UNIVERSITY

Telephone: MANHATTAN KS 66406-4026
                 785-532-1515

Organization you represent (if any): DEPARTMENT OF AGRICULTURAL ECONOMICS,

KANSAS STATE UNIVERSITY

1.   Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2004, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:

Source:_____   **Amount:**_____

Source:_____   **Amount:**_____

2.   If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2004, as well as the source and the amount of each grant or contract:

Source: SEE ATTACHED SHEET   **Amount:**_____

Source:_____   **Amount:**_____

Please check here if this form is NOT applicable to you: _____

Signature:_____

* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY.

Federal Grants or Contracts (including subgrants and subcontracts) <u>the organization</u> has received since October 1, 2004:

Improving Farm Competitiveness: Explaining and Forecasting Farm Profitability
       USDA (Through: USDA) - 11/15/2002 - 11/14/2005 $82,000.00

Kansas Urban Water Quality Restoration and Protection Initiative; & Part 2 (Year 2) (proposal = Planning Process Technical Assistance, Education and Outreach)
       EPA (Through: KS Dept. Of Health & Environment) - 01/01/2000 - 06/30/2007 $250,214.00

USDA Agricultural Marketing Resource Center
       USDA (Through: Iowa State University) - 09/27/2001 - 09/30/2006 $245,275.00

Information Technology and E-Commerce: Implications for Small Business Development in Rural Areas
       USDA - 09/15/2003 - 09/14/2006 $90,730.00

Market Risk Analysis for Organic Grain Farmers in the Great Plains
       USDA (Through: USDA) - 09/30/2003 - 09/29/2006 $158,726.00

The Potential Impact of Bovine Spongiform Encephalopathy (BSE) on Demand for Beef in the United
       States - USDA (Through: USDA) - 09/25/2003 - 12/31/2004 $15,000.00

Integrating Economic and Biophysical Models to Assess the Impacts of Water Quality Trading
       EPA (Through: EPA) - 01/01/2005 - 12/31/2006 $376,165.00

Improving Agriculture Students= Understanding of Global Production Systems through Distance Learning
       USDA (Through: USDA) - 09/01/2004 - 08/31/2006 $273,457.00

Cost Production Studies for Corn and Wheat Grown in Kansas
       USDA (Through: University of California) - 01/01/2004 - 01/31/2005 $17,638.00

Value Added Producer - Rainbow Organic Farms (Through: Rainbow Organic Farms)
       03/19/2004 - 03/18/2005 $50,000.00

Provision of Services to the Kansas Ag Innovation Center
       USDA (Through: Kansas Department of Commerce and Housing)
       - 01/01/2004 - 12/31/2004 $729,000.00

Development of a Research-Based Risk Assessment and Management Tool for Cattle Feeders
       USDA (Through: North Carolina State University) - 09/01/2004 - 08/31/2006 $206,376.00

Combining Livestock Risk Protection Insurance with Private Market Tools for Effective Cow-Calf Risk Management Plan
       USDA (Through: USDA) - 10/01/2004 - 09/30/2005 $149,962.00

The Value of the AU.S.A.@ Label on Retail Agricultural Products in Japan
       USDA (Through: USDA) - 09/01/2005 - 08/31/2007 $334,473.00

Meeting National Needs for Scholars Trained in Economics of Food Marketing and Biosecurity
USDA (Through: USDA) - 09/01/2005 - 08/31/2008 $276,000.00

Minority Fellows in the Economics of Food Safety and Biosecurity
USDA (Through: USDA) - 09/01/2005 - 08/31/2007 $128,000.00

Pollution Trading
EPA (Through: Kansas Department of Health & Environment)
10/11/2005 - 06/30/2010 $142,850.00

Value of Animal Traceability Systems in Managing Contagious Animal Diseases
USDA (Through: USDA) - 09/20/2005 - 09/30/2007 $151,791.00

Big Hill Creek/Big Hill Lake WRAPS Development
EPA (Through: Kansas Department of Health & Environment) $31,041.00

Elk City Lake WRAPS Development - Amend 102
EPA (Through: Kansas Department of Health & Environment) $31,041.00

Upper Verdigris/Toronto Lake WRAPS Development - Amend 103
EPA (Through: Kansas Department of Health & Environment) $31,041.00

Tuttle Creek Lake Watershed WRAPS Development
EPA (Through: Kansas Department of Health & Environment) $42,600.00

Milford Lake Watershed WRAPS Development
EPA (Through: Kansas Department of Health & Environment) $42,600.00